Health Services
LOS ANGELES COUNTY

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

18 July 9, 2013

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To ensure access to high-quality, patient-centered, cost-effective health care to Los Angeles County residents through direct services at DHS facilities and through collaboration with community and university partners.

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July 09, 2013

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

AUTHORIZE THE PURCHASE OF HARDWARE FOR THE DEPARTMENT OF HEALTH SERVICES' DATA CENTER TO SUPPORT A NEW CENTRAL BACK-UP AND ARCHIVE SOLUTION FOR THE PICTURE ARCHIVING AND COMMUNICATION SYSTEMS
ALL SUPERVISORIAL DISTRICTS)
(3 VOTES)

CIO RECOMMENDATION: APPROVE (X) APPROVE WITH MODIFICATION ( )
DISAPPROVE ( )

SUBJECT

Authorize the purchase of hardware for the Department of Health Services' located at Martin Luther King, Jr. Multi-Service Ambulatory Care Center Data Center to support a new central back-up and archive solution for the Philips Xcelera and Fuji SYNAPSE Picture Archiving and Communication Systems

IT IS RECOMMENDED THAT THE BOARD:

Authorize the Internal Services Department (ISD), as the County's Purchasing Agent, to proceed with the purchase of hardware with a total cost of approximately $430,000. In accordance with County purchasing policy #P-2710, Board approval is required to purchase capital assets that exceed the $250,000 threshold established by the Board.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of this action will allow for the purchase of the required enterprise archive, additional back-up hardware, and storage media for the Department of Health Services' (DHS) located at Martin Luther King, Jr. Multi-Service Ambulatory Care Center Data Center. The hardware and storage media will support a new central back-up and archive solution for the two main DHS Philips Xcelera and Fuji SYNAPSE Picture Archiving and Communication Systems (PACS) data repositories.

The Philips Xcelera and Fuji SYNAPSE PACS data repositories collect and store up-to-date x-ray images from all six main DHS hospitals and other DHS affiliated facilities and organizations. As a result, there is a significant amount of Philips Xcelera and Fuji SYNAPSE PACS data residing at the six main DHS facilities and on the DHS Enterprise PACS Archive Storage Area Network (SAN). This data places a substantial strain on disk storage and results in system-wide back-up and recovery inefficiencies.

This hardware will be used to support a new central back-up and archive solution that will deploy one central back-up and archive solution to the DHS Enterprise PACS Archive SAN, rather than to the six individual DHS facilities. This solution will also reduce storage needs by eliminating redundant data, ensure business continuity by avoiding critical data loss through failure of end-of-life back-up systems, and provides better recovery time objectives for longer retention periods of critical data. This back-up and archive solution will also provide full weekly back-ups that can be quickly recovered in just one step and eliminates the time required to restore full and subsequent, incremental back-ups to reach the desired recovery point. This new hardware will provide the latest infrastructure and tools to integrate, validate, back-up, and archive data to meet the Health Insurance Portability and Accountability Act retention requirements for x-ray images.

On October 16, 2001, the Board adopted a purchasing policy whereby departments must obtain Board approval to purchase or finance equipment with a unit or system cost of $250,000 or greater prior to submitting the requisition to the County's Purchasing Agent. The equipment exceeds the established $250,000 threshold for fixed asset purchases, and requires the Board's approval to proceed with the purchasing transaction.

Implementation of Strategic Plan Goals

The recommended action supports Goal 1, Operational Effectiveness, of the County's Strategic Plan.

FISCAL IMPACT/FINANCING

The total estimated cost of the hardware is approximately $430,000 and includes a manufacturer's warranty of one year and 24/7 on-site support. The details comprising the estimated total costs are shown in Attachment II.

Funding is included in DHS' Fiscal Year (FY) 2013-14 Adopted Budget.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

On October 16, 2001, the Board approved the classification categories for fixed assets and new requirements for major fixed assets (now referred to as capital assets) purchases requiring County

departments to obtain Board approval to purchase or finance equipment with a unit cost of $250,000 or greater prior to submitting their requisition to the County's Purchasing Agent.

The County's Chief Information Officer recommends approval of this purchase and that Office's Analysis is attached (Attachment I).

CONTRACTING PROCESS

The purchase of this hardware is under the statutory authority of the County's Purchasing Agent and will be accomplished in accordance with County Purchasing Policies and Procedures established by ISD.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of the recommendation will ensure the necessary hardware is purchased to support a new central back-up and archive solution for the Philips Xcelera and Fuji SYNAPSE PACS data repositories.

Respectfully submitted,

Mitchell H. Katz, M.D.
Director

RICHARD SANCHEZ
Chief Information Officer

MHK:RS:lr

Enclosures

c: Chief Executive Office
County Counsel
Executive Office, Board of Supervisors
Internal Services Department

RICHARD SANCHEZ
CHIEF INFORMATION OFFICER

Office of the CIO

CIO Analysis

NUMBER:	DATE:
CA 13-10	5/29/2013

SUBJECT:

AUTHORIZE THE PURCHASE OF HARDWARE FOR THE DEPARTMENT OF HEALTH SERVICES' DATA CENTER TO SUPPORT A NEW CENTRAL BACK-UP AND ARCHIVE SOLUTION FOR THE PICTURE ARCHIVING AND COMMUNICATION SYSTEMS (PACS)

RECOMMENDATION:

☒ Approve ☐ Approve with Modification ☐ Disapprove

CONTRACT TYPE:

☒ New Contract ☐ Sole Source
☐ Amendment to Contract #: Enter contract #. ☐ Other: Describe contract type.

CONTRACT COMPONENTS:

☒ Software ☒ Hardware
☐ Telecommunications ☒ Professional Services

SUMMARY:

Department Executive Sponsor: **Mitchell H. Katz, M.D.**

Description: **Authorize the Internal Services Department (ISD), as the County's Purchasing Agent, to proceed with the bid and purchase of hardware with a total cost of approximately $430,000.**

Contract Amount: **$429,088.96**

Funding Source: **DHS' Operating Budget Fiscal Year (FY) 2013-14**

☐ Legislative or Regulatory Mandate ☐ Subvened/Grant Funded: Enter %

Strategic and Business Analysis	PROJECT GOALS AND OBJECTIVES:
	To align with DHS' goal to reduce technical redundancy and costs and improve operational efficiencies. This solution will support a new central back-up and archive solution of the two main DHS Picture Archiving and Communication Systems (PACS) data repositories (Philips Xcelera and Fuji SYNAPSE). This will mitigate loss of crucial patient images and ensure a centrally controlled operation.

BUSINESS DRIVERS:

The three key business drivers for the project are:

1. **Operational efficiency**: This much faster and sophisticated system will be used to deploy a single central back-up and archive solution that will back-up the PACS SAN rather than backing-up DHS' facilities individually.
2. **Business continuity for critical patient data:** This solution will also reduce the storage needs by eliminating redundant data and ensure business continuity by avoiding critical data loss through failure of end-of-life back-up systems.
3. **Improved recovery time for sensitive patient data:** This solution will provide better recovery time objectives for longer retention periods of critical data in case of a disaster.

PROJECT ORGANIZATION:

Steven Saunders, Associate Chief Information Systems, is the DHS IT Project Executive Sponsor, Laurie Martinez, DHS IT Project Director, and Sid Skoulphong is the DHS IT Lead within DHS who will be working with the Enterprise Medical Digital Imaging Systems Project Management team.

PERFORMANCE METRICS:

Currently, the full back-up of 200TB of PACS data takes over two months. The RPO (Recovery Point Objective) and RTO (Recovery Time Objective) is over three months, in case of a total disaster. Performing a full restore on the PACS data, in the event of a disaster on the Enterprise PACS Archive SAN, can take over three months. RPO and RTO will significantly improve from three months down to less than three days using the proposed Quantum Scalar i6000 system. Full back-up window will be improved from two months, down to less than 20 hours.

STRATEGIC AND BUSINESS ALIGNMENT:

The project supports the Operational Effectiveness County Strategic Plan goal.

PROJECT APPROACH:

The selected vendor will perform the installation and configuration of the Scalar i6000 to DHS' PACS back-up and archive requirements in a single phase. Reggie McElroy, PACS Section Manager, will provide the appropriate project planning and guidance. DHS' Technology Services Back-up and Recovery team will work with the team to ensure a smooth transition for day-to-day operational support.

ALTERNATIVES ANALYZED:

DHS has considered using Avamar, however, it was not a cost-effective solution for PACS. The PACS data is primarily image files, which cannot be reduplicated. DHS has also considered other tape library solutions from both Spectralogic and IBM. Both solutions lacked the Extended Data Life Management (EDLM) capability that is very critical. EDLM allows for the validation of data against data corruption.

Technical Analysis	ANALYSIS OF PROPOSED IT SOLUTION: The Philips Xcelera and Fuji SYNAPSE PACS data repositories collect and store up-to-date x-ray images from all six main DHS' hospitals and other DHS affiliated facilities and organizations. As a result, there is a significant amount of Philips Xcelera and Fuji SYNAPSE PACS data residing at the six main DHS facilities and on the DHS Enterprise PACS Archive Storage Area Network (SAN). This data places a substantial strain on disk storage and results in system-wide back-up and recovery inefficiencies. This hardware will be used to support a new central back-up and archive solution that will deploy one central back-up and archive solution to the DHS Enterprise PACS Archive SAN, rather than to the six individual DHS facilities. This solution will also reduce the storage needs by eliminating redundant data, ensure business continuity by avoiding critical data loss through failure of end-of-life back-up systems, and will provide better recovery time objectives for longer retention periods of critical data. This back-up and archive solution will also provide weekly full back-ups that can be quickly recovered in just one step and will eliminate the time required to restore full and subsequent, incremental back-ups to reach the desired recovery point. This new hardware will also provide the latest infrastructure and tools to integrate, validate, back-up, and archive data to meet HIPAA retention requirements for x-ray images. The last full back-up of the current System was done in 2010. Since then only incremental back-ups have occurred as it takes about two months to do a full System back-up. <u>Quantum Scalar i6000 Technical Specifications</u> Health Services needs to procure a Quantum Scalar i6000 tape library to back-up and archive the PACS for both Fuji Synapse and Philip Xcelera. The enterprise class Scalar i6000 is designed with redundancy and growth built in. The main hardware components of the Quantum Scalar i6000 are listed below: • 22 Quantum Scalar i6000 LTO-6 tape drive modules; • 2 Quantum Scalar i6000 LTO-6 EDLM (Extended Data Life Management) drives; • 540 Quantum LTO-6 Data Cartridges; and • 2 Quantum 42u racks, 19" rack footprint. The Quantum Scalar i6000 is capable of supporting up to 45PB capacity with 96 LTO-6 drives and 7,224 data cartridges.

Financial Analysis	BUDGET: Contract costs minus the sales tax: One-time costs: Hardware ..... $ 323,210.69 Software ..... $ 17,212.50 Support ..... $ 40,214.20 (for 1 year) Services..... $ 19,362.61 Other County costs: N/A **Total one-time costs:** **$** 429,088.96
Risk Analysis	RISK MITIGATION: 1. The contract is for one year. CIO recommends at least a three year maintenance and support for the equipment. 2. The Chief Information Security Officer (CISO) has reviewed the Request and did not identify any IT security or privacy related issues.
CIO Approval	PREPARED BY: Sanmay Mukhopadhyay, Sr. Associate CIO — Date: 6/5/13 APPROVED: Richard Sanchez, County CIO — Date: 6-11-13

Please contact the Office of the CIO (213.253.5600 or info@cio.lacounty.gov) for questions concerning this CIO Analysis. This document is also available online at http://ciointranet.lacounty.gov/

Attachment II

COUNTY OF LOS ANGELES – DEPARTMENT OF HEALTH SERVICES

COST DETAIL - HARDWARE PURCHASE FOR THE NEW CENTRAL BACKUP AND ARCHIVE SOLUTION FOR THE PACS

Description *	**One-Time Cost**
Hardware (Quantum Scalar i6000) Subtotal	$323,210.69
Software Subtotal	$17,212.50
Support Subtotal	$40,214.20
Services Subtotal	$19,362.61
Sales Tax	$29,088.96
Grand Total	$429,088.96

* This acquisition will be competitively bid by the Purchasing Agent.